



RoHS Compliant ALUMINIUM ELECTROLYTIC CAPACITOR

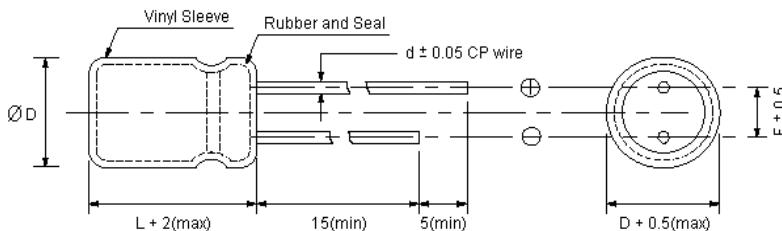
HL Series

■ FEATURES

- ◆ Load life of 5000 hours at 105°C
- ◆ Safety vent construction design
- ◆ For electronic ballast circuits, switching power supply, automotive and other long life required applications



■ OUTLINE



mm				
D	10	13	16	18
F	5.0		7.5	
d	0.6		0.8	

■ SPECIFICATIONS

Items	Characteristics									
Capacitance Tolerance (120Hz, 25°C)	$\pm 20\%$ (M)									
Rated Working Voltage Range	160 ~ 400Vdc				450Vdc					
Operation Temperature	-40°C ~ +105°C				-40°C ~ +105°C					
Leakage Current (25°C)	(After 2 minutes applying the DC working voltage) $I \leq 0.06CV + 10 (\mu A)$									
	◆ I : Leakage Current (μA) ◆ C : Rated Capacitance (μF) ◆ V : Working Voltage (V)									
Surge Voltage (25°C)	W.V.	160	200	250	350	400	450			
	S.V.	200	250	300	400	450	500			
Dissipation Factor (120Hz, 25°C)	W.V.	160	200	250	350	400	450			
	$\tan \delta$	0.15	0.15	0.15	0.20	0.24	0.24			
Temperature Characteristics	W.V.	160	200	250	350	400	450			
	- 25°C / + 25°C	3	3	3	5	5	6			
	- 40°C / + 25°C	6	6	6	6	6	-			
	◆ Impedance ratio at 120Hz									
Load Test	After 5000 hours application of WV at +105°C, the capacitor shall meet the following limits:									
	Capacitance Change	$\leq \pm 20\%$ of initial value								
	$\tan \delta$	$\leq 200\%$ of initial specified value								
	Leakage Current	\leq initial specified value								
Shelf Test	After 1000 hours, no voltage applied at +105°C, the capacitor shall meet the following limits:									
	Capacitance Change	$\leq \pm 25\%$ of initial value								
	$\tan \delta$	$\leq 200\%$ of initial specified value								
	Leakage Current	$\leq 200\%$ of initial specified value								

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■ DIMENSIONS

WV uF	160	200	250	350	400	450
3.3]	10 x 20
4.7]	13 x 20
10]	10 x 20	10 x 20	10 x 20	13 x 20
22	10 x 20	10 x 20	13 x 20	13 x 20	13 x 25	16 x 26
33	10 x 20	13 x 20	13 x 20	13 x 25	16 x 26	16 x 31
47	13 x 20	13 x 20	13 x 25	16 x 26	16 x 31	18 x 31
68	13 x 25	13 x 25	16 x 26	16 x 31	18 x 35	18 x 41
100	16 x 26	16 x 26	16 x 31	18 x 31	18 x 41	
150	16 x 31	16 x 35	18 x 31			
220	16 x 31	18 x 31	18 x 41			
330	18 x 31					

RC: mA (rms) at 120Hz 105°C

■ PERMISSIBLE RIPPLE CURRENT

Imp: mΩ (ohm) at 100KHz 25°C